

Advanced Multimedia Analog Overlay Chip

Description

The EM9010 is an advanced multimedia analog overlay chip that provides overlaying live video over VGA graphics. It is the ideal companion chip for applications displaying (full-screen or in a window) high-quality video, such as Progressive DVD.

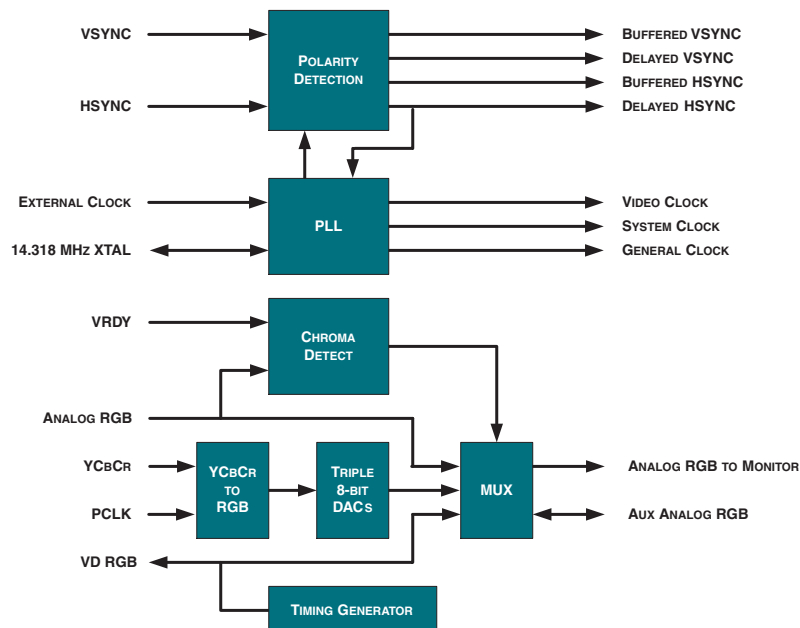
Analog overlay technology eliminates the need for the traditional feature connector on the VGA video card. This eliminates compatibility problems with different VGA feature connector standards and allows users to upgrade their graphics controller card without worrying about compatibility issues.

The EM9010 accepts both digital and analog inputs for MPEG video. Included on-chip are a YCbCr to RGB color space converter, triple 8-bit videoDACs, automatic polarity detection of the VGA HSYNC and VSYNC signals, and an integrated timing generator to generate PAL/NTSC timing signals.

Features

- Analog Overlay of Video and Graphics
- Supports Resolutions up to 1600x1200 at Refresh Rates up to 120 Hz
- Integrated Triple 8-bit VideoDACs Support 16.8M Colors
- Programmable RGB Color Key and Chroma Key Detection with six 8-bit DACs
- Three Integrated Programmable Clocks: Video Clock PLL (Recovery up to 75 MHz), System Clock PLL, and General-Purpose Clock PLL
- YCbCr to RGB Color Space Converter Operating up to 75 MHz with 10-bit Precision

Block Diagram



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EM9010

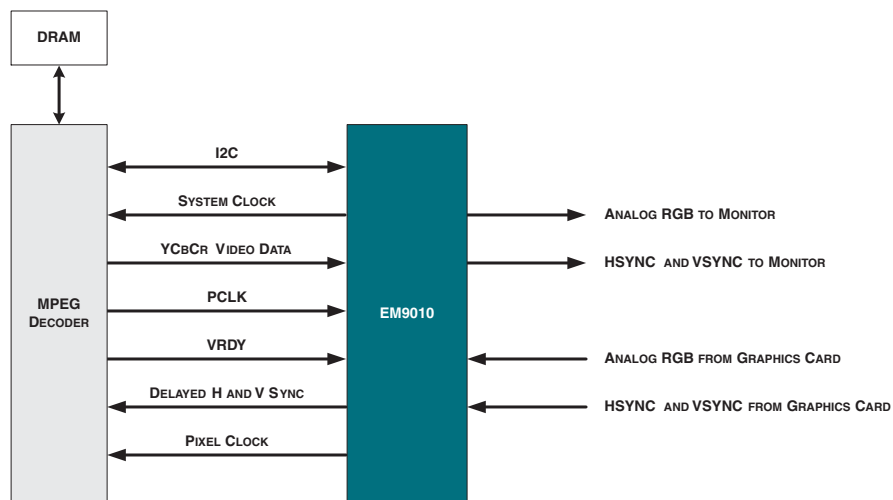
Three internal programmable Phase Locked Loops (PLL) are provided. One generates a pixel clock locked to the horizontal sync input. The other two are derived from a standard 14.318 MHz crystal and may be used for system clock and general-purpose clock generation.

The EM9010 may also be used in applications with out any MPEG video data. The AUX RGB inputs may be used to input analog RGB data from an auxiliary device like 3D graphics card.

Features

- AUX RGB Inputs
- Automatic Polarity Detection of VGA HSYNC and VSYNC Inputs
- NTSC/PAL Timing Generator
- I2C Interface to Access Internal Registers
- Power Supply: +5V
- Package: 64-pin TQFP

Application Example

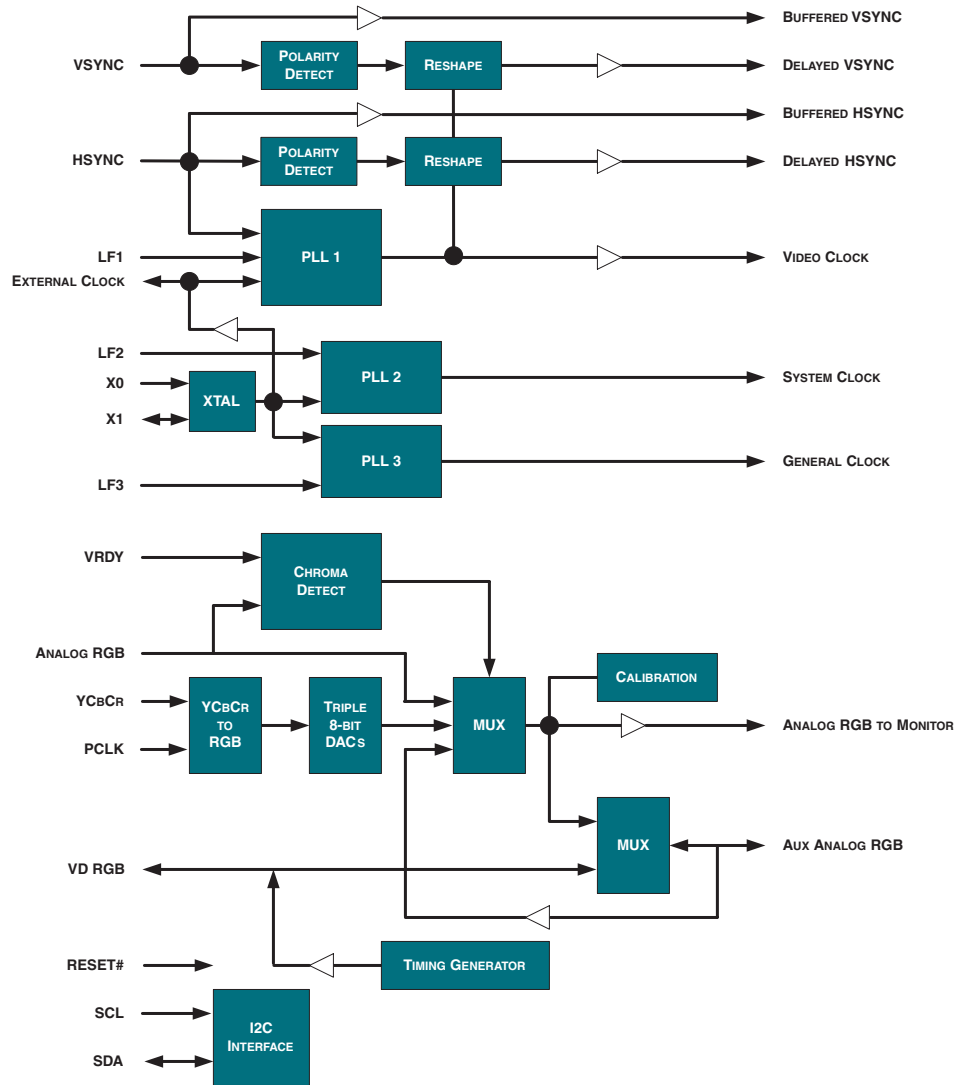


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Detailed Block Diagram



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